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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,858	12/22/2001	Bernhard Raaf	112740-344	6325

29177 7590 09/19/2005

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EXAMINER

SAMS, MATTHEW C

ART UNIT PAPER NUMBER

2643

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/009,858	Applicant(s) RAAF, BERNHARD	
	Examiner Matthew C. Sams	Art Unit 2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 1-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 25-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action has been changed in response to the amendment filed on 7/7/2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 25, 27-32, 36-37, 40-43 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen et al. (US-5,603,096 hereafter, Gilhousen) in view of Gilhousen et al. (US-5,280,472).

Regarding claim 25, Gilhousen teaches a method for controlling the transmission power in a radio system by evaluating a signal received by a receiver via the transmission channel, producing power control information as a function of the evaluation, sending the power control information embedded in a time slot structure to the transmitter, and setting the transmission power in the transmitter as a function of the power control information. (Col. 2 line 64 through Col. 3 line 63) Gilhousen differs from the claimed invention by not showing a coding in the receiver for power control information in a time slot, with redundancy, with further data to be transmitted in the

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same one time slot to form a common data word, with at least one bit value in the data word depending on the power control information and on the further data and transmitting the power control information to the transmitter. However, Gilhousen et al. teaches coding in the receiver for power control information in a frame (Col. 24 lines 42-45), with redundancy (Col. 15 lines 26-36), with further data to be transmitted in the same one time slot to form a common data block (Col. 22 lines 17-40 and Col. 27 lines 17-21), with at least one bit value in the data word depending on the power control information and on the further data and transmitting the information to the transmitter. (Col. 15 lines 9-36 and Col. 27 lines 17-21) Gilhousen et al. teaches power control bits are inserted at the output of the convolutional interleaver (Col. 22 lines 27-29), block encoded and Walsh encoded prior to transmission. (Col. 27 lines 17-21) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate coding of power control information in a receiver of Gilhousen et al. into the method of controlling transmission power in a radio system of Gilhousen. One of ordinary skill in the art would have been motivated to do this since power adjustments can be made during communication transmissions.

Regarding claim 27, Gilhousen teaches a method of controlling the transmission power in a radio system including further data that is user data. (Col. 5 lines 41-49)

Regarding claim 28, Gilhousen teaches power control information that is transmitted in binary form. (Col. 9 line 16-17)

Regarding claim 29, Gilhousen teaches a method of transmission power control in a radio system where the bits in the power control information are coded with bits of

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the further data to form a common binary data word. (Col. 2 line 64 through Col. 3 line 3)

Regarding claim 30, Gilhousen teaches a method of controlling transmission power in a radio system, wherein the coded data word includes a plurality of a sum of bits in the power control information and the bits in the further data. (Col. 2 lines 17-63)

Regarding claim 31, Gilhousen teaches a method of controlling transmission power in a radio system where during the coding process, at least one bit in the coded data word is assigned a value of the power control information to be transmitted in the corresponding time slot. (Col. 2 line 40 through Col. 3 line 3)

Regarding claim 32, Gilhousen in view of Gilhousen et al. teaches a method of controlling transmission power in a radio system where during the coding process, one bit in the coded data word is assigned a value of the information to be transmitted in the one time slot from the further data. (Col. 3 lines 48-63) Gilhousen et al. teaches power control bits are inserted at the output of the convolutional interleaver (Col. 22 lines 27-29), block encoded and Walsh encoded prior to transmission. (Col. 27 lines 17-21)

Regarding claim 36, Gilhousen teaches a method of controlling transmission power in a radio system where the receiver is a base station and produces the coded power control information. (Col. 3 lines 48-63) Gilhousen teaches the transmitter which receives the power control information and sets the transmission level appropriately is a mobile station. (Col. 3 lines 48-63)

Regarding claim 37, Gilhousen in view of Gilhousen et al. teaches a radio system that includes control for the transmission power in a radio system by evaluating a signal received by a receiver via the transmission channel, producing power control

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information as a function of the evaluation, sending the power control information embedded in a time slot structure to the transmitter, and setting the transmission power in the transmitter as a function of the power control information. (Col. 2 line 64 through Col. 3 line 63)) Gilhousen differs from the claimed invention by not showing a coding in the receiver for power control information in a time slot, with redundancy, with further data to be transmitted in the same one time slot to form a common data word, with at least one bit value in the data word depending on the power control information and on the further data and transmitting the power control information to the transmitter. However, Gilhousen et al. teaches coding in the receiver for power control information in a frame (Col. 24 lines 42-45), with redundancy (Col. 15 lines 26-36), with further data to be transmitted in the same one time slot to form a common data block (Col. 22 lines 17-40 and Col. 27 lines 17-21), with at least one bit value in the data word depending on the power control information and on the further data and transmitting the information to the transmitter. (Col. 15 lines 9-36 and Col. 27 lines 17-21) Gilhousen et al. teaches power control bits are inserted at the output of the convolutional interleaver (Col. 22 lines 27-29), block encoded and Walsh encoded prior to transmission. (Col. 27 lines 17-21) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate coding of power control information in a receiver of Gilhousen et al. into the method of controlling transmission power in a radio system of Gilhousen. One of ordinary skill in the art would have been motivated to do this since power adjustments can be made during communication transmissions.

Regarding claim 40, the limitations of claim 40 are rejected as the same reason set forth above in claim 28.

Regarding claim 41, the limitations of claim 41 are rejected as the same reason set forth above in claim 29.

Regarding claim 42, the limitations of claim 42 are rejected as the same reason set forth above in claim 31.

Regarding claim 43, the limitations of claim 43 are rejected as the same reason set forth above in claim 32.

Regarding claim 47, Gilhousen teaches a radio system as a CDMA mobile radio system. (Col. 1 58-61)

Regarding claim 48, the limitations of claim 48 are rejected as the same reason set forth above in claim 36.

4. Claims 26, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen in view of Gilhousen et al. as applied to claims 25 and 37 above, further in view of Takayama et al. (US-5,982,294 hereinafter, Takayama).

Regarding claim 26, Gilhousen in view of Gilhousen et al. teaches a method of controlling transmission power in the radio system as stated in claim 25, but differs from the claimed invention by not showing that further data is format identification information. However, Takayama teaches a communication protocol that includes data for format identification information. (Fig. 4 [401] and Col. 14 lines 23-51) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the data format of Takayama into the method of controlling transmission power of the radio system of Gilhousen in view of Gilhousen et al. because transmitting format identification information allows the receiver to recognize the synchronization pattern of the transmitter. (Col. 14 lines 23-49)

Regarding claim 38, the limitations of claim 38 are rejected as the same reason set forth in claim 26.

Regarding claim 39, Gilhousen teaches a receiver that codes the power control information together with user data for the same time slot. (Col. 2 lines 31-39)

5. Claims 33-35 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen in view of Gilhousen et al. as applied to claims 25 and 37 above, further in view of Raith (US-5,751,731).

Regarding claim 33, Gilhousen in view of Gilhousen et al. teaches a method of controlling transmission power in a radio system as in claim 29, but differs from the claimed invention by not showing that during the coding process, at least one bit in the coded data word is assigned a value which corresponds to a logic operation between the power control information and the further data to be transmitted. However, Raith teaches coding with the logical operation as an exclusive or operation of the codeword with known bits. (Col. 13 lines 25-29) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the coding of the logical operation of an exclusive of Raith with the method of controlling transmission power in a radio system of Gilhousen in view of Gilhousen et al. because having the logic operation encoded in a known bit in the codeword simplifies the decoding process because the number of possible decoded values is reduced and then less susceptible to bit errors. (Col. 10 lines 3-33 and Col. 11 line 48 through Col. 12 line 53)

Regarding claim 34, Gilhousen in view of Gilhousen et al. and Raith teach a logic exclusive-or operation as a logic operation. (Gilhousen – Col. 2 lines 17-47 & Raith - Col. 13 lines 25-29)

Regarding claim 35, Gilhousen teaches a power control bit that is recovered during decoding by the transceiver that has the power control information. (Col. 2 line 64 through Col. 3 line 63)

Regarding claim 44, the limitations of claim 44 are rejected as the same reason set forth above in claim 33.

Regarding claim 45, the limitations of claim 45 are rejected as the same reason set forth above in claim 34.

Regarding claim 46, the limitations of claim 46 are rejected as the same reason set forth above in claim 35.

Response to Arguments

6. Applicant's arguments with respect to claims 25-48 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US-5,812,938 to Gilhousen et al. regarding cyclic redundancy checking code, power control commands encoded into frames and error correcting control for CDMA.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (571)272-7499. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MCS
9/7/2005



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